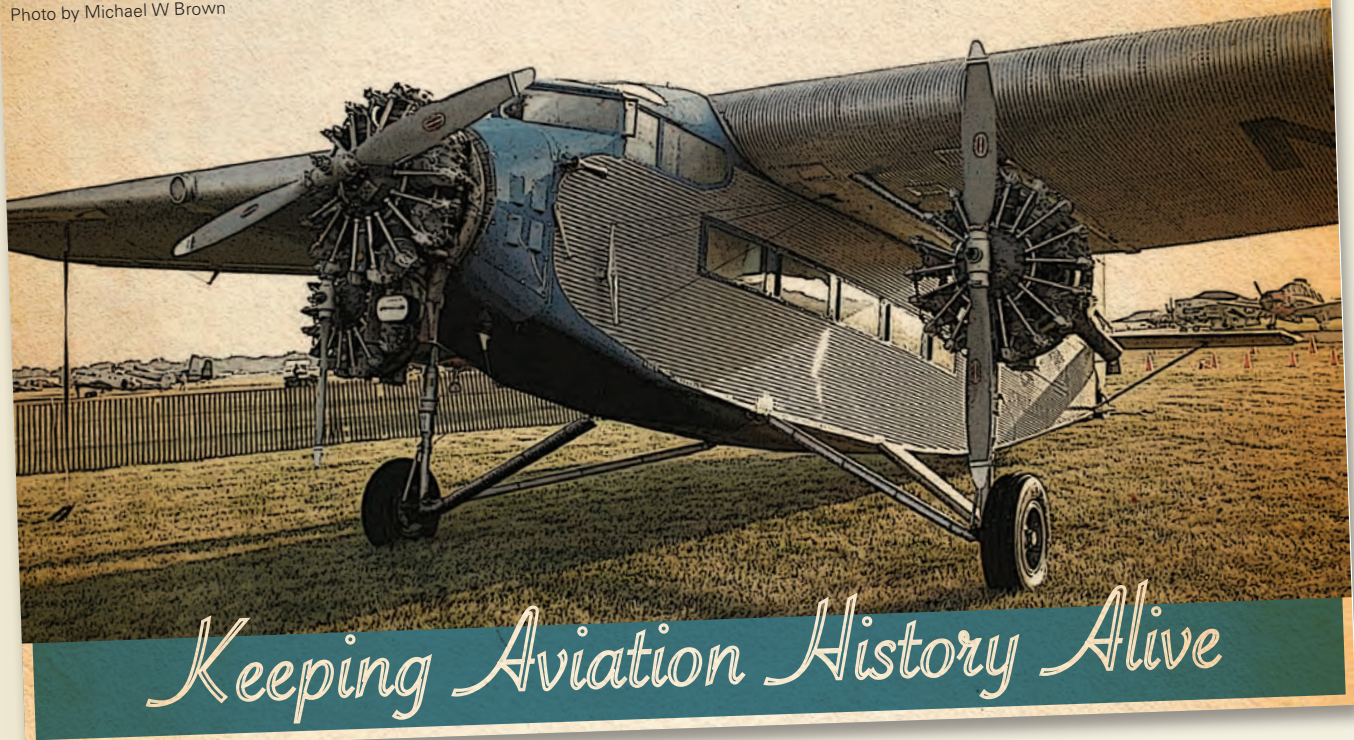


A VINTAGE LOT

Photo by Michael W Brown



Keeping Aviation History Alive

TOM HOFFMANN

The word vintage can take on several meanings. For some, it could invoke memories of a bold, crisp cabernet sauvignon. Others might think of floral-embroidered bell-bottoms or velvet mini-dresses. Or, it could even be a light-hearted euphemism for those folks in their more “advanced” years.

But for pilots and airplane aficionados, the word vintage immediately conjures images of P-51 Mustangs, DC-3s, Ford Tri-Motors, and more as it rekindles the nostalgia of a bygone era.

Vintage aircraft are often the headliners at air shows and fly-ins across the country, and with their colorful and patriotic livery, are among the first spotted by spectators. Yet, have you ever stopped to appreciate how these aerial “landmarks” are able to safely grace our skies, well after their original tours of duty?

Behind the scenes of air shows, aircraft displays, and air races—like those found at Reno’s National Championship Air Races & Air Show—is the hard work of several hundred dedicated individuals, who ensure the vintage aircraft on display all look, sound, and fly just like they did in their prime. Despite the showbiz glitz and glamour

associated with these types of aircraft, maintaining their safe operation and historical accuracy is not easy. It’s often a labor of love for these stalwarts of aviation history, whose reward is the knowledge these flying national treasures will continue to safely astound spectators for generations to come.

The Power of Teamwork

How is safety oversight for so many different types of vintage aircraft managed from the FAA perspective? It’s a tall order and requires a collaborative effort. A big part is keeping pilots current and qualified, particularly on aircraft that require a type rating for the pilot in command (PIC). Realizing that there are not enough qualified aviation safety inspectors to provide initial qualification and proficiency checks in many types of large vintage aircraft, the FAA entered into a partnership with the Experimental Aircraft Association (EAA) to create the National Designated Pilot Examiner Registry (NDPER, pronounced en-DEEP-er), which sets the guidelines for maintaining a cadre of highly-experienced examiners qualified to conduct practical tests and proficiency checks in certain vintage aircraft.

Two pristine examples of Waco aircraft



Officially created in 1993, the NDPER program was created under the provisions outlined in a letter of agreement between FAA and EAA. It was later amended to include the National Designated Flight Engineer Examiner Registry (NDFEER) for reciprocating-engine-powered airplanes. Following the framework of the agreement, FAA establishes the policy and provides oversight, while EAA maintains overall administration of the program.

A similar agreement is in place that handles initial and proficiency checks in all of the various types of experimental exhibition aircraft, which have a unique set of operating limitations. This group is known as the Experimental Aircraft Examiners (EAE).

Currently, there are eight active examiners nationwide in the NDPER program and 13 EAEs. Both sets are listed on the EAA Web site (<http://www.warbirds-eaa.org/programs>) along with the aircraft groups they are qualified to conduct checkrides on. While EAE and NDPER operate independently, plans call for the two groups to be combined in 2010, and for the examiners to be known collectively as Specialty Aircraft Examiners.

FAA Aviation Safety Inspector Raymond “Ray” Stinchcomb is the program manager for NDPERs and EAEs and interfaces regularly with each of the examiners to provide guidance and support as needed. Stinchcomb also meets with the EAA at its headquarters in Oshkosh, Wisconsin, during AirVenture® and during the annual NDPER meeting each January. Stinchcomb is featured in this issue’s FAA Faces column.

“It’s a small, tight-knit group,” says Stinchcomb, “And, by working together and keeping the avenues of communication open, we’ve been successful with facilitating the continued safe operation of vintage aircraft.”

FAA announced at this year’s AirVenture® another initiative designed to keep vintage aircraft flying. The Vintage Designated Engineering Representative (VDER) program designates engineers, whose expertise covers all systems of a

particular vintage aircraft, and authorizes them to approve any technical data for that aircraft. The VDER program, a joint venture between FAA and EAA, helps reduce the cost and complexity related to repairs or modifications for vintage aircraft owners.

Who Said Time Machines Don’t Exist?

The thought of flying in a restored B-17G *Flying Fortress* or AT-6 *Texan* may seem too good to be true, but at many air shows and flight museums across the country, reliving the glory days of aviation in a vintage aircraft is easier than you might think. Keep in mind, however, the availability of these historical flight experiences are limited by the category of airworthiness the aircraft is listed in, as well as the business intentions of the operator.

Although some vintage aircraft can have a standard airworthiness certificate and can be used for local sightseeing rides, many are categorized as either “limited” or “experimental,” and due to operating limitations requirements in Title 14 Code of Federal Regulations (14 CFR) sections 91.315 and

CAST A VOTE FOR YOUR FAVORITE

Celebrating its 11th year, the National Aviation Heritage Invitational will be a featured event at the National Championship Air Races & Air Show. The Invitational’s objective is to preserve aviation history by restoring vintage aircraft to original flying condition. Aircraft owners and restorers will compete for the coveted Rolls-Royce Aviation Heritage Trophy. Competing aircraft are judged in three categories—Military, Classic, and Antique—and must be 45 years or older. The greater the historical accuracy and authenticity, the better an aircraft’s chance to “fly” away as the winner.

To get visitors and fans more involved with the event, the People’s Choice Award gives everyone attending a chance to vote for their favorite aircraft. If you’re at Reno this year, be sure to check out these historical aircraft and cast your ballot!



A New Standard D-25 offers a taste of the vintage aircraft experience to the public.

91.319(a)(2) cannot carry persons or property for compensation or hire. However, some operators of these aircraft can conduct these operations under exemptions. Also, 14 CFR section 91.319(c) prohibits aircraft with an experimental certificate from operating over a densely populated area or in a congested airway, unless otherwise authorized by the Administrator. While these regulations are critical to assuring aviation safety, the FAA does take into consideration the importance of operating historic aircraft.

Part of that consideration is taking into account the public's interest in maintaining, preserving, and flying these aircraft. The cost of operating the aircraft includes expensive and hard-to-get parts, storage fees, and fuel for engines that aren't exactly models of efficiency. One flight hour on a B-17 can cost more than \$4,500!


The Commemorative Air Force (CAF), based in Midland, Texas, is one example of a nonprofit aviation association dedicated to honoring military aviation. The CAF has more than 9,000 members who maintain a fleet of 171 vintage warbirds worldwide—making it one of the world's largest air forces. The CAF Web site has a search feature to locate the closest CAF chapter where you can experience a flight in a T-6 or a P-51 *Mustang* (two

planes you're likely to see at the races in Reno). "The CAF, along with other similar organizations, are important elements in maintaining our nation's rich aviation heritage," says FAA Accident Investigator T.R. Proven, who is Operations Officer for the CAF's National Capitol Squadron in Virginia.

It Takes a Village to Save an Aircraft

In addition to FAA's regulatory support, there are several entities that help keep vintage aircraft operating safely, including the Vintage Aircraft Association and Warbirds of America (both subdivisions of EAA), as well as other vintage aircraft type clubs. The success of these organizations is due in large part to the volunteer efforts of aviators and aviation enthusiasts, who spend countless hours to keep America's aviation heritage a living, breathing entity, rather than existing only through museums, photographs, and stories.

The next time you see low-flying B-25 on a mock strafing run or hear the distinctive roar of a P-51's mighty V-12 Merlin engine overhead, take a moment to acknowledge the extraordinary behind-the-scenes efforts of the men the women who keep these essential chapters of aviation history alive and well, and most importantly, safe.

As the Warbirds of America exclaim, "Keep 'Em Flying!" 

FAA ISSUES AC FOR VINTAGE AIRCRAFT

On May 18, 2009, FAA issued [Advisory Circular \(AC\) 23-27](#), *Parts and Materials Substitution for Vintage Aircraft*. The intent of the AC is to provide guidance on parts or materials substitutions used for maintaining old or out-of-production GA aircraft where these parts or materials are difficult or impossible to obtain. Today, vintage aircraft need safety-enhancing upgrades and modifications to maintain their continued airworthiness. These same vintage aircraft often have little of the data required to get FAA approval of such modifications, making it difficult for owners to perform these changes. AC 23-27 helps address these issues by making suitable replacement parts selection easier and by reducing the time required to accomplish safety-enhancing upgrades.

Tom Hoffmann is associate editor of FAA Aviation News. He is a commercial pilot and holds an A&P certificate.

For More Information

Advisory Circular AC 23-27 – Parts and Materials Substitution for Vintage Aircraft

<http://rgl.faa.gov/>, click Advisory Circular and search [AC 23-27](#)

Vintage and Experimental Aircraft Program page

http://www.faa.gov/licenses_certificates/vintage_experimental/

Vintage Aircraft Association (VAA)

<http://www.vintageaircraft.org/>